

POST-CLOSURE CARE PLAN

(Applies to Scheduled and Unscheduled Closure Plans)

US ECOLOGY NEVADA

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POST-CLOSURE CARE PLAN
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SECTION 17

POST-CLOSURE CARE PLAN

The post-closure care period begins upon closure of the facility and continues for 30 years. Should US Ecology Nevada determine at any time during the post-closure care period that any of the monitoring or maintenance activities are no longer necessary or that revisions to the approved plan are required, the facility operator will petition the Nevada Division of Environmental Protection (NvDEP) Administrator for a modification to the plan. The modification request will be submitted at least 60 days prior to the proposed change.

A detailed description of the post-closure care activities at the facility is provided in the following sections.

17.1.0 INSPECTION AND MAINTENANCE ACTIVITIES

Because of the infrequency of rainfall events, and the limited amount of damage that sparse rainfall could cause to the surface of the final cover system, the post-closure plan calls for semi-annual inspections of the final cover system and other facility features. Less frequent inspections of other facility features may be appropriate, but for the sake of convenience, they will be performed concurrently with inspections of the final cover.

17.1.1 Maintenance of Final Cover

The surface of the closed landfill cells will be inspected for subsidence, cracking, vegetative stress, burrowing animals or erosion semi-annually. Cracks, depressions, animal burrows and erosion ditches will be filled as necessary with site soils (from excess materials stockpiled on site), and compacted.

After installation of the final cover, there will be no need to control run-off from the disposal unit, since the landfilled waste will be completely isolated.

17.1.2 Maintenance and Protection of Surveyed Benchmarks

The two reference points forming the base of the facility grid system and the benchmark used for vertical control shall be preserved and protected by converting them to permanent markers at the beginning of the post-closure period. The resulting structures shall be visible and outside of any traffic routes.

17.1.3 Installation and Maintenance of Run-On Controls

The facility's run-on control systems will be inspected semi-annually for any condition that could prevent their proper functioning, and repaired as needed.

17.1.4 Maintenance and Inspection of Security Control Devices

Existing fences, gates and signs will remain in place to restrain access to the facility and as points of reference. These will be inspected concurrently with other facility features described in this plan, and repaired or replaced, as necessary.

17.1.5 Maintenance and Inspection of Monitoring Wells System

Because the monitoring wells will not be used for water production, it is unlikely that the well screens will clog to such an extent as to prevent the collection of representative samples. The post-closure plan provides for replacement of one well pump per year. This maintenance would be performed during a regularly scheduled semi-annual sampling event, so no additional man-hours are anticipated. The facility water supply well will be sampled on the same schedule as other monitoring wells at the facility. The water supply well will be maintained as the source of on-site maintenance water. The monitoring wells are provided with locks to minimize the risk of vandalism.

17.1.6 Maintenance and Inspection of Leachate Collection and Removal System

Inspection of the leachate collection sump risers to identify damage and maintenance needs will be conducted semi-annually while inspecting the landfill cap and other site features. Monitoring of the leachate detection system sumps and recording of sump liquid levels initially will be conducted monthly. The monitoring/recording frequency will be reduced to a quarterly if the liquid level in the sump stays below the pump operating level for two consecutive months. After two consecutive quarters of recording sump liquid levels below pump operating level, monitoring/recording frequency will be changed to semi-annual. If, at any time during the post-closure period (while following the quarterly or semi-annual schedules), the sump liquid levels exceed the pump operating level, the unit will be returned to monthly monitoring until the liquid level stays below pump operating level for two consecutive months.

For the purpose of calculating the cost associated with monitoring of liquid detection sumps, it is assumed that monthly monitoring will be required throughout the first year after completion of facility closure. After the first year, the monitoring/recording frequency will be reduced to quarterly, as the presence of leachate in the sumps is expected to diminish significantly, and the liquid level in the sumps is likely to stay below the pump operating level. The sumps will be monitored quarterly during the second year following closure completion. Thereafter, monitoring of the sumps will be conducted semi-annually.

Records of leachate generation rates will be analyzed in each post closure report to determine whether there is a statistically significant increase in the rates.

All leachate pumped from the collection sumps during the post-closure period will be stored in totes or other approved containers and be transported off-site to a facility authorized to accept F039 waste.

17.2.0 FACILITY MONITORING

Post-closure monitoring is required and is assumed for cost estimating purposes to proceed in the same manner described for the facility's active life (see the Groundwater Monitoring Plan submitted as part of the Renewal Permit Application with regards to the system configuration, parameters to be monitored for, and groundwater sampling and analysis procedures). In addition, Basin Lysimeters constructed within the Trench 11 and Trench 12 final covers will be monitored to determine whether rainwater and snowmelt are infiltrating the cover.

For the purpose of calculating the cost associated with monitoring of Basin Lysimeters, it is assumed that monthly monitoring will be required throughout the first year after completion of facility closure. After the first year, the monitoring/recording frequency will be reduced to quarterly, as the first year's monitoring is expected to demonstrate that no infiltration takes place during any single month. After the second year following closure completion, the Basin Lysimeters will be monitored semi-annually.

17.3.0 POST-CLOSURE CONTACT

The contact for information at any time during the post-closure care period will be:

Director of Environmental Affairs
US Ecology, Inc.
Lakepointe Centre I
300 East Mallard Drive, Suite 300
Boise, Idaho 83706
(208) 331-8400

17.4.0 SURVEY PLAT

No later than the date when the landfill closure certification is submitted, US Ecology Nevada, will submit to the NvDEP Administrator and the Recorder's Office of Nye County, Nevada, a survey plat indicating the location and dimensions of the landfill cell with respect to permanently

surveyed benchmarks. The plat will be prepared and certified by a professional land surveyor, and will contain a note, prominently displayed, stating US Ecology's obligation to restrict disturbance in accordance with the requirements of 40 CFR 264. 117(c).

17.5.0 POST-CLOSURE NOTICES

By contractual agreement with the facility owner (The State of Nevada), the facility will revert to state control at the time of closure and the State will provide post closure care using funds already set aside for this purpose.

No later than 60 days after certification of landfill closure, US Ecology Nevada will submit to the NVDEP Administrator, and the Recorder's Office of Nye County, Nevada, a record of the type, location and quantities of hazardous waste disposed of within each cell.

Within 60 days after closure certification, a notation will be recorded on the facility deed, (as recorded in the Recorder's Office of Nye County, Nevada) that will notify potential purchasers that:

- The property has been used for disposal of hazardous waste, and
- The use of the property is restricted under 40 CFR 264. 117(c) (relating to Post- Closure Care and Use of Property), and
- The survey plat and record of the type, location, and quantity of hazardous wastes disposed of within each cell have been filed with the Recorder's Office of Nye County, Nevada, and with the NVDEP Administrator.

A certification, signed by a company representative, will be submitted to the Administrator stating that the above notation has been recorded in the facility deed. A copy of the deed will be provided with the certification.

17.6.0 POST-CLOSURE CERTIFICATION

Within 60 days of completion of the post-closure care period, US Ecology, Inc. will submit to the NDEP Administrator a certification attesting that the post-closure care period for the hazardous waste disposal unit was performed in accordance with specifications of the approved post-closure plan. The certification will be signed by a facility representative, and by an independent professional engineer, registered in the State of Nevada.

17.7.0 POST-CLOSURE CARE COST ESTIMATE

The cost estimate for post-closure care activities of the disposal units at US Ecology Nevada facility is included at Appendix A.

17.8.0 PLAN MODIFICATIONS

US Ecology will submit a written notification of, or request for a permit modification to authorize a change in the approved Post-Closure Plan if:

- Changes in operating plans or facility design affect the approved plan, or
- There is a change in the expected year of final closure, or
- Events which occur during the active life of the facility affect the plan.

The request for permit modification will be submitted at least 60 days prior to the proposed change in facility design or operation, or no later than 60 days after an unexpected event which requires revisions to the approved plan.

APPENDIX 17-A
POST-CLOSURE CARE COST ESTIMATE



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POST-CLOSURE CARE COST ESTIMATE

2009 Post Closure Cost

ITEM NO.	ITEM	UNIT	UNIT COST	UNIT COST REF	QNTY	2008 Total	2009 Inflation Adjusted Rate	2009 Total
1	SITE MONITORING (Inc. Groundwater Sampling - 4 Events/Yr, 6 Days per Event for 30 years)							
	Labor	Hr	\$ 65.00	40E	5760	\$374,400	1.0203	\$383,011.20
	Subtotal 1					\$374,400	1.0203	\$383,011.20
2A	QRTLTY LABORATORY TESTING (* 18 wells - Analyzed for Constituents in Permit Tables 10.4, 10.5, and 10.6, analyzed quarterly for 30 years)							
	Analysis	Each	\$ 1,000.00	35A	2160	\$2,160,000	1.0203	\$2,203,848.00
	Subtotal 2A					\$2,160,000	1.0203	\$2,203,848.00
2B	ANNUAL LABORATORY TESTING (* 5 Suplimental wells - Analyzed for Constituents in Permit Tables 10.4, 10.5, 10.6, analyzed every 5th quarter for 30 years)							
	Analysis	Each	\$ 1,000.00	35A	120	\$120,000	1.0203	\$122,436.00
	Subtotal 2B					\$120,000	1.0203	\$122,436.00
3	SITE MONITORING (Run-on controls, etc. 2 events/yr, 1 day/event, combined w/ groundwater monitoring)							
	Labor	Hr	\$ 65.00	40E	480	\$31,200	1.0203	\$31,833.36
	Subtotal 3					\$31,200	1.0203	\$31,833.36
4	WELL/FENCE MAINTENANCE							
	Well Pump Replacement	Each	\$ 9,435.25	24	30	\$283,058	1.0203	\$288,804.08
	Fence Repair	LF	\$ 48.08	22	3,000	\$144,243	1.0203	\$147,171.13
	Subtotal 4					\$427,301	1.0203	\$435,975.21
5	LANDFILL							
	Cover Repair/Grading	Day	\$ 1,494.17	25	45	\$67,238	1.0203	\$68,602.93
	2 years leachate monitoring - labor	Hr	\$ 65.00	40E	208	\$13,520	1.0203	\$13,794.45
	Dispose of leachate	Gal	\$ 0.96	28	90,000	\$86,670	1.0203	\$88,429.40
	Transportation of leachate	Load	\$ 1,800.00	32	12	\$21,600	1.0203	\$22,038.48
	Leachate analysis (for 6 quarters)	Each	\$ 1,000.00	35B	6	\$6,000	1.0203	\$6,121.80
	Leachate Pump Replacement	Each	\$ 9,435.25	24	2	\$18,871	1.0203	\$19,254.08
	Subtotal 5					\$213,898		\$218,241.14
6	CORRECTIVE ACTION (Monitoring SVE)							
	Monitoring and extracting of vapors*	Each	\$ 40,000.00	NA	0	\$0		\$0.00
	Subtotal 6					\$0		\$0.00
7	SITE SURVEY							
	Survey Plat (one time event)	LF	\$ 1.71	1	11,340	\$19,347	1.0203	\$19,739.74
	Re-confirmation survey 20 reference points every 5 years (5 times in 30 years)	LF	\$ 1.71	1	5,670	\$9,674	1.0203	\$9,870.38
	Subtotal 7					\$29,021	1.0203	\$29,610.12
8	POST CLOSURE CERTIFICATE (Consultant)							
	Principal Engineer	Hr	\$ 155.00	40A	40	\$6,200	1.0203	\$6,325.86
	Senior Engineer	Hr	\$ 115.00	40C	50	\$5,750	1.0203	\$5,866.72
	Clerical/Wordprocessing	Hr	\$ 55.00	40G	40	\$2,200	1.0203	\$2,244.66
	Other Direct Costs (Travel, reproduction)		\$ 2,000.00	N/A	1	\$2,000	1.0203	\$2,040.60
	Subtotal 8					\$16,150	1.0203	\$16,477.84
TOTAL POST-CLOSURE COSTS FOR 30 YEARS						\$3,371,969		\$3,442,433

NDEP is responsible for cost associated with operating and maintaining corrective actions